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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/401,167	09/21/1999	YUNG KU LEE	929-2	4303

23869 7590 12/26/2002

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EXAMINER

VERBITSKY, GAIL KAPLAN

ART UNIT PAPER NUMBER

2859

DATE MAILED: 12/26/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/401,167

Applicant(s)
Lee

Examiner
Gail Verbitsky

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Oct 15, 2002
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 17-19 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 17-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other: _____

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 6, 10, 17 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over JP 07027626 [hereinafter JP] in view of Mock et al. 4037470 [hereinafter Mock].

JP discloses in Fig. 1 a thermometer comprising a housing having an outer and an inner surfaces. The housing is made as a unitary (monolithic) structure by joining a main part of the housing and a cover 7; the housing is made of a transparent material whose surface other than a window (viewing area) 20 is coated with an opaque (increased absorptivity) member 13 (abstract). The thermometer also comprises a temperature sensor, a cover 7 and a display seen through the window (adjacent and substantially congruent to the window). In a broad sense, JP's housing can be made by injection molding because injection molding is a very well known method used to form a monolithic structure of a plastic material.

JP does not disclose an inner or outer surface to be made opaque by roughening.

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Mock teaches to have an inner surface (sphere) roughened in order to increase its absorptivity, thus, to make it substantially less transparent. Mock states that in this case diffuse reflections (scattering) will occur and will be captured by the surface.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device disclosed by JP so as to have the inner surface roughened in order to increase its absorptivity, as taught by Mock, because having the surface roughened or coated with an opaque coat, are alternate two ways of making the surface opaque to light, if one is replaced with the other.

With respect to use of at least one of a mechanical or chemical treatment by exposure to abrading, etching or grinding, as stated in claim 6: JP forms the housing by injection molding. Claim 6 is a "product by process" claim since the claim language is directed to the steps required to form the housing (at least one surface). Therefore, these steps have been given no patentable weight since it has been held that 1) the determination of patentability in "product by process" claim is based on the product itself, even though such claims are limited and defined by the process, and 2) the product in a "product by process" claim is unpatentable if it is the same as, or obvious from a product of the prior art, even if the prior art product was made by a different process. **In re Thorpe et al.** 227 USPQ 964 (Fed. Cir. 1985).

With respect to the particular material, i.e., polycarbonate, as stated in claim 10: JP makes the cover part and the main part of polystyrene. To make the cover part and the main part of the housing of polycarbonate, absent any criticality, is only considered to be the use of an

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“optimum” material that a person having ordinary skill in the art at the time the invention was made using routine experimentation would have found obvious to provide to make the main part and the cover of the thermometer used by JP since it has been held to be a matter of obvious design choice and within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use of the invention. **In re Leshin** 125 USPQ 416.

With respect to “whereby” as stated in claims 1, 17: it has been held that the functional “whereby” statement does not define any structure and accordingly can not serve to distinguish. **In re Mason**, 114 USPQ 127 44 CCPA 937 (1957).

3. Claims 4, 7 and 9 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over JP and Mock as applied to claims 1-3, 6, 10, 17 above, and further in view of Takagi 4729672 [hereinafter Takagi].

JP and Mock disclose a device as stated above in paragraph 2.

They do not explicitly disclose that the housing is made by ultrasonic welding, a tip made of a metal and batteries housed within the housing, as stated in claims 4, 7, 9.

Takagi discloses in Fig. 1 a device comprising a housing made of a main part and a cover (housing batteries) part attached to each other by ultrasonic bonding (weld) and constituting, thus, a one piece (unitary/ monolithic) structure. Takagi also discloses a metal probe cap 51 for protecting the temperature sensing unit.

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the monolithic housing made by injection molding disclosed by JP and Mock with a monolithic housing made by ultrasonically attaching the main part to the cover part, as taught by Takagi, because ultrasonic welding makes the housing watertight which will prevent the housing from contamination when disposed in a harsh environment.

It would have also been obvious to one of ordinary skill in the art at the time the invention was made to add a metal cap, as taught by Takagi, to the device disclosed by JP and Mock in order to protect the temperature sensing unit, as already suggested by Takagi.

It would have further been obvious to one of ordinary skill in the art at the time the invention was made to add batteries, as taught by Takagi, inside the housing disclosed by JP and Mock, so as to have a power supply to the thermometer in order for the thermometer to operate properly.

4. Claim 5 is finally rejected under 35 U.S.C. 103(a) as being unpatentable over JP and Mock as applied to claims 1-3, 6, 10 and 17 above, and further in view of Plimpton.

JP and Mock disclose the device as stated above in paragraph 2.

They do not explicitly disclose an LCD as stated in claim 5.

Plimpton discloses in Fig. 1 a device comprising an LCD.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the display disclosed by JP and Mock with an LCD, as taught by

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Plimpton, because both of them are alternate types of displays commonly used in the temperature art which will perform the same function of giving the user a visual information about the temperature measured, if one is replaced with the other.

5. Claim 8 is finally rejected under 35 U.S.C. 103(a) as being unpatentable over JP and Mock as applied to claims 1-3, 6, 10 and 17 above, in view of Tseng.

JP and Mock disclose the device as stated above in paragraph 2.

They do not disclose a switch as stated in claim 8.

Tseng discloses a device in the field of applicant's endeavor comprising a switch 34 to turn the device on/off.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add the switch, as taught by Tseng, to the housing of the device disclosed by JP and Mock, in order to turn the device on/off, as already suggested by Tseng.

6. Claims 18-19 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over JP and Mock as applied to claims 1-3, 6, 10 and 17 above, and further in view of savant et al. (U.S. 6241903B1) [hereinafter Savant].

JP and Mock disclose the device as stated above in paragraph 2.

They do not disclose that the roughening is done by etching, as stated in claims 18-19

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Savant states that a surface can be roughened by an etching process in order to achieve desired diffuser output characteristics and a desired surface relief.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device disclosed by JP and Mock, so as to achieve roughening by etching, as taught by Savant, in order to achieve a desired diffusion of the surface along with desired surface relief (roughening), as already suggested by Savant.

Response to Arguments

7. Applicant's arguments filed on October 15, 2002 have been fully considered but they are not persuasive. .

Applicant states that Mock does not teach the roughening of a surface to block light in one area while transmitting in another area. This argument is not persuasive because this limitation has not been stated in the claims. It is the claims that define the claimed invention, and it is claims, not specification that are anticipated or unpatentable. Constant v. Advanced Micro-Devices, Inc., 7 USPQ2d 1064.

Applicant states that Mock teaches roughening of the entire inner surface. This argument is not persuasive because, the Examiner uses Mock only to show that the inner surface of the housing disclosed by JP having a transparent window, can be treated by roughening instead of coating by an opaque coat, so as to make it nontransparent.

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With respect to "whereby", as stated in claims 1, 17: please refer to paragraph # 2 of the Office action.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in the PTO-892 and not mentioned above disclose related devices.

10. Hvid et al. discloses a medical container made of a medical grade transparent plastic such as polycarbonate.

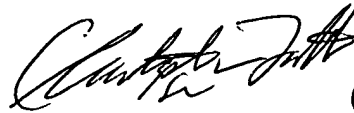
11. Any inquiry concerning this communication should be directed to the Examiner Verbitsky whose telephone number is (703) 306-5473.

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Any inquiry of general nature should be directed to the Group Receptionist whose telephone number is (703) 308-0956.

GKV

December 23, 2002



Diego Gutierrez

**CHRISTOPHER W. FULTON
PRIMARY EXAMINER**

Supervisory Patent Examiner

TC 2800